

CLAIMS

What is claimed is:

- 1 1. In an apparatus, a method of operation comprising:
2 powering a hardware element of the apparatus with a power supply of the
3 apparatus;
4 operating the hardware element at a first power consumption level;
5 monitoring for absence of AC to the power supply;
6 generating a signal to indicate AC failure on detection of absence of AC to
7 the power supply; and
8 in response, throttling the hardware element to operate at a second power
9 consumption level that is a reduced power consumption level than the first power
10 consumption level.
- 1 2. The method of claim 1, wherein the monitoring and generating are
2 performed by the power supply.
- 1 3. The method of claim 1, wherein
2 the hardware element operates at a first clock frequency when operating
3 at the first power consumption level; and
4 the throttling of the hardware element comprises switching the hardware
5 element to operate at a second clock frequency slower than the first clock
6 frequency.
- 1 4. The method of claim 1, wherein

2 the hardware element operates at a first voltage when operating at the first
3 power consumption level; and

4 the throttling of the hardware element comprises switching the hardware
5 element to operate at a second voltage lower than the first voltage.

1 5. The method of claim 1, wherein the hardware element comprises a
2 processor and the throttling of the hardware element comprises periodically
3 interrupting a processor clock.

1 6. The method of claim 1, wherein the hardware element comprises a
2 selected one of a processor and a chipset.

1 7. The method of claim 1, wherein the method further comprises
2 waiting for a period of time; and
3 initiating a process to suspend the apparatus to memory, if AC remains
4 absent to the power supply after waiting for the period of time.

1 8. The method of claim 7, wherein the method further comprises canceling
2 the wait if AC returns during the waiting period.

1 9. The method of claim 1, wherein
2 the hardware element comprises a processor; and
3 the throttling comprises a chipset in response to the signal, signaling the
4 processor to switch from operating at the first power level of consumption to the
5 second power level of consumption.

1 10. In an apparatus, a method of operation comprising:

2 monitoring for re-presence of AC to a power supply of the apparatus after
3 an earlier absence of AC to the power supply;
4 generating a signal to indicate the presence of AC on detection of re-
5 presence of AC to the power supply; and
6 throttling a hardware element to switch to operate at a first power
7 consumption level from operating at a second power consumption level, the
8 second power consumption level being a reduced power consumption level than
9 the first power consumption level.

1 11. The method of claim 9, wherein the monitoring and generating are
2 performed by the power supply.

1 12. The method of claim 9, wherein
2 the hardware element operates at a first clock frequency when operating
3 at the first power consumption level, and at a second clock frequency when
4 operating at the second power consumption level, the first clock frequency being
5 faster than the second clock frequency; and
6 the throttling of the hardware element comprises switching the hardware
7 element from operating at the second clock frequency back to operating at the
8 first clock frequency.

1 13. The method of claim 9, wherein
2 the hardware element operates at a first voltage when operating at the first
3 power consumption level, and at a second voltage when operating at the second
4 power consumption level, the first voltage being higher than the second voltage;
5 and

6 the throttling of the hardware element comprises switching the hardware
7 element from operating at the second voltage to operating at the first voltage.

1 14. The method of claim 9, wherein the hardware element comprises a
2 processor, and the throttling comprises ceasing interruption of a processor clock.

1 15. The method of claim 9, wherein
2 the hardware element comprises a processor; and
3 the throttling comprises a chipset in response to the signal, signaling the
4 processor to switch to operate at the first power consumption level, from
5 operating at the second power consumption level.

1 16. A system comprising:
2 a power supply including a monitor to detect for absence of AC, and
3 generate a first signal to indicate accordingly on so detecting; and
4 a hardware element coupled to the power supply, and equipped to
5 normally operate in a first power consumption level, and to switch to operate in a
6 second consumption level that is a reduced power consumption level than the
7 first power consumption level, in response to a selected one of the first signal
8 and a second signal generated in view of the first signal.

1 17. The system of claim 15, wherein
2 the hardware element operates at a first clock frequency when operating
3 at the first power consumption level; and
4 the hardware element switches to operate at a second clock frequency
5 that is slower than the first clock frequency, when operating at the second power
6 consumption level.

1 18. The system of claim 15, wherein
2 the hardware element operates at a first voltage when operating at the first
3 power consumption level; and
4 the hardware element switches to operate at a second voltage that is
5 lower than the first voltage, when operating at the second power consumption
6 level.

1 19. The system of claim 15, wherein
2 the hardware element comprises a processor;
3 the processor operates with on an uninterrupted processor clock when
4 operating at the first power consumption level; and
5 the processor switches to operate interrupting the processor clock
6 periodically, when operating in the second power consumption level.

7 20. The system of claim 15, wherein the hardware element comprises a
8 selected one of a processor and a chipset.

1 21. The system of claim 15, wherein
2 a mechanism coupled to the power supply to facilitate transfer of control to
3 an operating system in response to the first signal; and
4 the operating system equipped to initiate a suspend process to suspend
5 the system to memory, after waiting a period of time.

1 22. The system of claim 15, wherein the system further comprises a
2 networking interface.

1 23. An article of manufacture comprising:

2 a storage medium; and
3 a plurality of programming instructions stored on the storage medium, and
4 designed to program an apparatus to enable the apparatus to initiate a suspend
5 process to suspend the apparatus to memory when the apparatus is in an AC
6 failed condition, powered by a backup power, after waiting a period a time.

1 24. The article of claim 22, wherein the programming instructions are further
2 designed to enable the apparatus to cancel the delayed initiation of the suspend
3 process if AC returns during the waiting period.

1 25. The article of claim 22, wherein the programming instructions are further
2 designed to enable the apparatus to complete a resume process, continuing
3 operation from a previously suspended system state, if AC returns while the
4 apparatus is in the suspended to memory state.